CIVIL-TECH CONSULTANTS AND ENGINEERS

Building & Highway Material Testing Laboratory

An ISO 9001:2008 Certified Company

JAS-ANZ BSCIC ISO 9001 REGISTERED

Job No.: CTCE/BBMP/W.No.12/A/CEMENT/2013-14

Date: 04.12.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. Ashoka,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013
SAMPLE ID	:	CEMENT
SAMPLES SUPPLIED BY	:	AGENCY

The results of the tests conducted on the cement sample are as follows:

Sl.No	Descriptions	Test Method as per IS	Test Result	Requirements as per IS: 1989-2013
1	Standard Consistency	IS-4031 (Part -4)	28.00 %	-
2	a) Initial Setting Time	IS-4031 (Part -5)	145 Minutes	Not Less than 30 Minutes
	b) Final Setting Time	IS-4031 (Part -5)	490 Minutes	Not More than 600 Minutes
3	Soundness by the Le-Chatelier method	IS-4031 (Part 3)	1 mm	Not more than 10 mm

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Job No.: CTCE/BBMP/W.No.12/A/SAND/2013-14 : 04.12.2013

TEST REPORT ON FINE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Mr. Ashoka,** Contractor, Bangalore.

Name of Work : Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013

Date of Testing : 04.12.2013

Material : Sand Total Wt. of Aggregates in gms **2000**

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits For Zone-II
10	0	0	0	100	100
4.75	84	4.20	4.20	95.8	90-100
2.36	255	12.75	16.95	83.1	75-100
1.18	390	19.50	36.45	63.6	55-90
600 Micron	475	23.75	60.20	39.8	35-59
300 Micron	425	21.25	81.45	18.6	8-30
150 Micron	285	14.25	95.70	4.3	0-10

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Job No.: CTCE/BBMP/W.No.12/A/AGG/2013-14 : 04.12.2013

TEST REPORT ON COARSE AGGREGATES
IS 383-1970 (RA- 2002)

Client : **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.

Agency : **Mr. Ashoka,** Contractor, Bangalore.

Name of Work : Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.

Reference : BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013

Date of Testing : 04.12.2013

Material : 40mm Aggregates

Total Wt. of Aggregates in gms 25000

Is Sieve Size in mm	Weight Retained (gm)	Retained Weight in %	Cumulative Retained Weight in %	Cumulative Weight Passing in %	Spec.Limits
80	0	0	0	100	100
40	915	3.66	3.66	96.34	95-100
20	16050	64.20	67.86	32.14	30-70
10	4125	16.50	84.36	15.64	10-35
4.75	3255	13.02	97.38	2.62	0-5

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Job No.: CTCE/BBMP/W.No.12/A /STEEL/2013-14 05.12.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Ashoka,** Contractor, Bangalore.
Name of the Work	:	Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013
Date of Test	:	05.12.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	8	0.40	510	552	13.05	O.K	O.K

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Job No.: CTCE/BBMP/W.No.12/A /STEEL/2013-14 05.12.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Ashoka,** Contractor, Bangalore.
Name of the Work	:	Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013
Date of Test	:	05.12.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	10	0.62	513	556	13.20	O.K	O.K

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Job No.: CTCE/BBMP/W.No.12/A /STEEL/2013-14 05.12.2013

TEST REPORT ON REINFORCEMENT STEEL

Client	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	:	**Mr. Ashoka,** Contractor, Bangalore.
Name of the Work	:	Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	:	BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013
Date of Test	:	05.12.2013
Technical Reference	:	IS: 1786-2008

Sl. No	Nominal size (dia) (mm)	Mass per metre (Kg/mtr)	TENSILE STRENGTH			Bend Test	Rebend Test
			0.20% proof stress/Yield stress N/mm^2	Tensile strength (Ultimate stress) N/mm^2	Elongation percent gauge length		
1	12	0.89	515	558	13.35	O.K	O.K

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Job No.: CTCE/BBMP/W.No.12/A/BRICKS/2013-14 Date: 13.12.2013

TEST REPORT

CLIENT	:	**Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
AGENCY	:	**Mr. Ashoka,** Contractor, Bangalore.
NAME OF THE WORK	:	Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
REFERENCE	:	BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013
SAMPLE ID	:	BRICKS
SAMPLES SUPPLIED BY	:	CLIENT

The results of the tests conducted on the samples are as follows:

Sl. No	Description	Test method as per IS Codes	Result	Requirement as per IS 1077-1992 (Rev-5)
1	Compressive Strength Of Bricks	IS 3495-1992 (Part-1)	5.85 N/mm^2	Class designation 5.0
2	Water Absorption of Bricks	IS 3495-1992 (Part – 2)	10.25 %	Not more than 20 %
3	Efflorescence of Bricks	IS 3495-1992 (Part – 3)	Moderate	Up to 12.5 Class
4	Dimensional Analysis of Bricks (minimum Sampling is 20 Nos)	IS 1077-1992 (Rev – 5)		
(a)	Measurement of Length in mm		4670 mm	(4600 ± 80 mm)
(b)	Measurement of Width in mm		2235 mm	(2200 ± 40 mm)
(c)	Measurement of Height in mm		1435 mm	(1400 ± 40 mm)

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Job No.: CTCE/BBMP/W.No.12/A/CUBE/2013-14

17.01.2014

TEST REPORT ON CONCRETE CUBES

Client	: **Asst. Executive Engineer,** Shettyhalli Sub Division, BBMP, Bangalore.
Agency	: **Mr. Ashoka,** Contractor, Bangalore.
Name of the work	: Construction of Primary School at Shetthyhalli, in Ward No.12, in Shettyhalli Sub Division, BBMP, Bangalore.
Reference	: BBMP/DZ/AEE/SSD/PR/2013-14 Dated: 02.12.2013
Sample ID	: Cement Concrete
Size of cubes	: 150mmx150mmx150mm
Cross Sectional Area	: 22500 mm^2
Technical Reference	: IS: 516-1959 (Reaffirmed 2008)
Grade of Concrete	: M_{20}
Compressive Strength as on	: 28th day

Sl.No.	Date of casting	Date of testing	Weight of cube (Kg)	Failure load (KN)	Compressive strength (N/mm^2)
1	20.12.2013	17.01.2014	8.135	478.6	21.27
2	20.12.2013	17.01.2014	8.259	499.6	22.20
3	20.12.2013	17.01.2014	8.372	515.3	22.90

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